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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/622,658	10/16/2000	Erich Kamperschroer	P00,1569	2692

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BELL, BOYD & LLOYD, LLC
P. O. BOX 1135
CHICAGO, IL 60690-1135

EXAMINER

NG, CHRISTINE Y

ART UNIT	PAPER NUMBER
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2663

DATE MAILED: 02/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/622,658

Applicant(s)

KAMPERSCHROER ET AL.

Examiner

Christine Ng

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 6-8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>5</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The pre-amendment of 8/21/2000 has not been entered since such words were not found in claims 4, 6 and 8.

Drawings

2. The drawings were received on 10/16/2000. These drawings are acceptable.

Specification

3. The abstract of the disclosure is objected to because the abstract reads like a claim. Correction is required. See MPEP § 608.01(b).

Claim Objections

4. Claims 6-8 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,055,427 to Ojaniemi in view of U.S. Patent No. 6,031,827 to Rikkinen et al.

Referring to claim 1, Ojaniemi discloses in Figure 2 a method for controlling the

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handover of telecommunication connections in telecommunication systems with wireless telecommunication between mobile (MS) and stationary devices (BSC_1) based on CDMA. Refer to Column 2, lines 38-64. The method comprises a first phase of a handover procedure, the handover indication (Step 2), whereby a handover time slot pair (traffic channel) is identified by a stationary device (BSC_1). If the pilot signal from BTS_2 is greater than BTS_1, BSC_1 will "request a handoff to BTS_2 from a MSC by means of a signal 2 Handoff_Required" (Column 3, lines 24-25). BSC_2 will then reserve a "traffic channel from BTS_2 with a signal 4 Resource_Reservation" (Column 3, lines 29-30). Refer to Column 3, lines 19-31. The method also comprises a second phase of the handover procedure, the handover initiation (Step 8). The handover initiation includes that the stationary device (BSC_1) sends a first message "Handover Request" (Extended_Handoff_Direction) to mobile devices (MS) allocated to the stationary device (BSC_1) with which the stationary device (BSC_1) informs the mobile devices (MS) of the handover time slot (traffic channel). During this phase, BSC_1 "transmits to the subscriber station MS typically on the traffic channel a signal 8 Extended_Handoff_Direction" (Column 3, lines 39-41). The handover initiation also includes that the stationary device (BSC_1) sends the first message "Handover Request" (Extended_Handoff_Direction) to the mobile devices (MS) until all mobile devices (MS) allocated to the stationary device (BSC_1) have confirmed the initiation of the handover by the first message (Extended_Handoff_Direction). In response to the Extended_Handoff_Direction signal, the MS transmits a signal 9 Mobile_Station_

Acknowledgement_Order. Refer to Column 3, lines 39-44. The system also comprises a third phase of the handover procedure, the execution of a handover (Step 10). After the MS transmits a signal 9 Mobile_Station_Acknowledgement_Order, "BSC_1 communicates to the MSC that the handoff may be initiated with a signal 10 Handoff_Commenced" (Column 3, lines 53-55).

Ojaniemi does not disclose that the method is implemented in a CDMA/TDD system.

Rikkinen et al disclose in Figure 2A a CDMA/TDD system. The system comprises carrier frequencies (for carrying frame 14) predetermined for the telecommunication system respectively divided such into a plurality (8) of time slots (Element 15) having a respectively predetermined time slot duration (0.577 ms) that the telecommunication system can be operated in the TDD mode, whereby the time slots (Element 15) per carrier frequency respectively form a time-division multiplex frame (Element 14). "The length of the frame in the time direction is about 4.615 ms, and it is divided, into time direction, into eight time slots, in which case the length of one time slot 15 is about 0.577 ms" (Column 5, lines 7-10). Transmission in each cell can also be arranged according to the TDD method. Refer to Column 14, lines 51-54. As shown in Figure 9, the system also comprises a predetermined plurality of bidirectional telecommunication connections in upstream (Element 14, UL) and downstream (Element 14, DL) direction between the telecommunication subscribers of the mobile devices and the stationary devices can be simultaneously set up in the time slots. Refer to Column 15, lines 12-16. As shown in Figure 2B, the connections can also be set up

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in the frequency ranges of the telecommunication system, whereby subscriber signals thereby transmitted are operated for separability with PN signals individually allocated to the subscribers. "During each time slot 15, there may be a different number of allowed spreading codes, with different spreading ratios" which define "how much physical radio resources must be allocated to a single connection" (Column 6, lines 13-18). Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to include that the method can be implemented in a CDMA/TDD mode; the motivation being that a in TDD mode, both uplink and downlink communications are allocated to the same carrier frequency. The propagation condition on both uplink and downlink directions are thus similar, thereby making it possible to control the transmission power level of a station by measuring the corresponding reception power.

Referring to claim 2, Ojaniemi discloses in Figure 2 that the first message, Extended_Handoff_Direction (Step 8), is confirmed by a second message, Mobile_Station_Acknowledgement_Order (Step 9). BSC_1 sends the first message, Extended_Handoff_Direction, to the MS (Step 8). In response to the Extended_Handoff_Direction message, the MS transmits a second message, Mobile_Station_Acknowledgement_Order (Step 9). Refer to Column 3, lines 39-44.

Referring to claim 3, Ojaniemi discloses in Figure 2 that the first message Extended_Handoff_Direction (Step 8) is confirmed in that the mobile devices (MS) immediately transmit data to be transmitted in the handover time slot pair (traffic channel). BSC_1 sends the first message, Extended_Handoff_Direction, to the MS (Step 8) on the newly assigned traffic channel. In response to the Extended_Handoff_

Direction message, the MS transmits a second message, Mobile_Station_Acknowledgement_Order (Step 9) also on the newly assigned traffic channel. Refer to Column 3, lines 39-44.

7. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,055,427 to Ojaniemi in view of U.S. Patent No. 6,031,827 to Rikkinen et al, and in further view of U.S. Patent No. 5,812,543 to Sugita.

Referring to claim 4, Ojaniemi and Rikkinen et al do not disclose that the transmission path services fashioned as bearer services that are required in the downstream and/or upstream direction in the system are bundled in a code level erected by codes.

Sugita disclose in Figure 2 that bearer services including the pilot channel, sync channel, paging channel and traffic channels that are required in the downstream direction are bundled in a code level erected by codes. The base station includes a PN code generator (Element 101), Walsh code generators (Elements 102) and multipliers (Elements 103) for multiplying the PN code from the PN generator (Element 101) with the Walsh codes from the Walsh code generators (Elements 102) for each of the bearer services. Refer to Column 1, lines 19-44. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that bearer services that are required in the downstream and/or upstream direction in the system are bundled in a code level erected by codes; the motivation being that CDMA systems utilize codes to distinguish between the transmission of different control and traffic channels for multiple users.

Referring to claim 5, Ojaniemi and Rikkinen et al do not disclose that at least a part of the logical channels - for example the control channel for signaling, AGCH channel, BCCH channel, PCH channel, RACH channel, TCH channel or FACCH channel) of the system - are bundled in the code level as bearer services.

Sugita disclose in Figure 2 that logical channels, including the control channels (pilot channel, sync channel and paging channel) and the traffic channels, are bundled in the code level as bearer services. The base station includes a PN code generator (Element 101), Walsh code generators (Elements 102) and multipliers (Elements 103) for multiplying the PN code from the PN generator (Element 101) with the Walsh codes from the Walsh code generators (Elements 102) for each of the bearer services. Refer to Column 1, lines 39-44. The pilot channel is used for acquisition and maintenance of synchronization at the mobile station; the sync channel is used for matching the time and the long code at the mobile station; the paging channel is used for transmitting handoff information to the mobile user; and the traffic channel is used for transmission of data. Refer to Column 1, lines 26-38. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that at least a part of the logical channels of the system are bundled in the code level as bearer services; the motivation being that logical channels such as the pilot, sync, paging and traffic channels are required in a system for transferring information about acquisition and maintenance of synchronization, handoff and traffic data to the mobile user.

Allowable Subject Matter


8. Claims 7 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

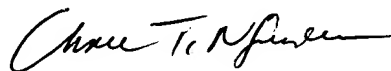
Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Ng whose telephone number is (703) 305-8395. The examiner can normally be reached on M-F; 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nguyen Chau can be reached on (703) 308-5340. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C. Ng 
February 6, 2004


CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600